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Sanford et al.

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(54) **TIBIAL PROSTHESIS WITH A FIXED BEARING COMPONENT**

(56) **References Cited**

U.S. PATENT DOCUMENTS

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3,774,244 A 11/1973 Walker
4,016,606 A 4/1977 Murray et al.
(Continued)

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FOREIGN PATENT DOCUMENTS

AU 2011286306 B2 10/2014
CA 2190029 A1 11/1995
(Continued)

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OTHER PUBLICATIONS

“U.S. Appl. No. 13/189,324, Examiner Interview Summary dated Jan. 13, 2014”, 4 pgs.

(Continued)

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CPC A61F 2/38; A61F 2/3836–2/3854; A61F 2/3886; A61F 2/389
See application file for complete search history.

(57) **ABSTRACT**

A tibial prosthesis has a bearing component configured for an anterior-medial insertion, which advantageously avoids the extensor mechanism of the knee. A tibial tray may include a banana-shaped boss that corresponds to a notch formed in the bearing component. After the bearing component is inserted along the anterior-medial path, the boss is received within the notch by rotating the bearing component with respect to the tibial tray. This rotation seat the bearing component upon the tibial tray in the manner of a fixed-bearing prosthesis. Alternatively, the boss and notch may define angled central axes which allow straight anterior-medial insertion of the bearing component and locking engagement to the tibial tray.

17 Claims, 13 Drawing Sheets

